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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,110

06/25/2004

Hiroshi Matsuoka

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EXAMINER

MESH, GENNADIY

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

05/11/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,110	<b>Applicant(s)</b> MATSUOKA ET AL.	
	<b>Examiner</b> GENNADIY MESH	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4, 6 and 9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4, 6 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1.1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 23, 2009 has been entered.

1.2. Claims 1-3, 5 and 7-8 are canceled by Applicant. Claims 4, 6 and 9 are active.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 4, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al.( JP 2000-029247) in view of Hattori ( US 5,665,510).

Nakanishi discloses composition for toner, wherein toner binder composition comprising structural units having polyester structure, structural units derived from styrene resin, structural units derived from epoxy group, structural units derived from isocyanate and wax – see [0005],[0007],[0012], [0013] [0020] and [0023].

Nakanishi ( JP 247) further discloses that polyester resin can be present in composition in the amount from 10wt.% to 90 wt.% ( see [0018]), having Molecular weight in a range from 1000 to 20000 ( see [0019]), hydroxyl value of less than 70 mgKOH/g ( see [0010]), acid number from 0 to 50 mgKOH/g and from 0.5 to about 2 mole equivalents of isocyanate groups for 1 mole of hydroxyl groups ( see [0012]) and wax can be present in the preferable amount from 1- 7 wt% ( see [0023]). Therefore, Nakanishi discloses overlapping ranges for individual components of the composition.

Nakanishi ( JP 247) is silent regarding epoxy equivalent of epoxy group containing resin.

However, Hattori teach that toner binder resin ( see lines 61 – 68,column 2) comprising polyester and polystyrene modified with epoxy group, wherein epoxy equivalent should be in range from 500 to 20,000 g/eq ( see lines 65-67,column 3 and lines 1-9,column 4) and preferably in range from 1000 to 5000 g/eg in order to obtain pulverizable toner with optimized blocking properties.

Therefore, it would have been obvious to one of ordinary of skill to select polystyrene epoxy resin with epoxy equivalent taught by Hattori in order to obtain pulverizable composition for toner as it disclosed by Nakanishi ( JP 247) with optimized blocking properties.

Regarding limitation of Claim 9 : Nakanishi disclose styrene content in range from 60 wt% to 99 wt% - this range meet limitation as " styrene content ... is 35 wt.% or more".

Note, that newly added limitation as "wherein the order of mixing is by introducing the polyester type resin ... with the epoxy group containing styrene type resin and further introducing the polyisocyanate" is in format of a product by process claim.

Case law holds that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on **the product itself**. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

In this case, product disclosed by Nakanishi in view of Hattori appears to be substantially same as the product claimed by Applicant, because it satisfied all compositional limitations of Claim 4.

### ***Response to Arguments***

3. Applicant's arguments filed on April 23, 2009 have been fully considered but they are not persuasive.

3.1. Applicant's arguments related to Claims 4, 6 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al.( JP 2000-029247) in view of Hattori ( US 5,665,510) based on following statement:

"The present specification demonstrates that the polyester resins obtained by the recited process are superior to those obtained by processes which do not meet the recitations of claim 4. Specifically, as shown in Tables 1-10 of the present specification, Examples 2, 3, 5-8, 10 and 12-29, which were prepared by the processes as recited in present claim 4, provided superior results in terms of the balance of fixing properties, offset-resistant properties and storage (or blocking resistant) properties, as well as environmental stability, compared to Comparative Examples 1-7, Reference Examples 1-10 and Examples 1, 4, 9 and 11, which were prepared by processes not meeting the recitations of claim 4. It is noted that the storage properties correspond to blocking resistant properties (page 3, lines 13 to 14)".

This argument was found unpersuasive for following reason:

Table 1, Examples 1-4 provide data for composition comprising resin A4 which is different ( see [0163] than resin A2( see [0161]) recited in Claim 4. Therefore, Applicant argument is not commensurate with language of Claim 4 and for this reason is not persuasive.

3.2. Applicant further argue that" ... the present specification describes at page 2, lines 7 to 3 from the bottom, that the amount of the polyester resin (A2) (and the styrene resin (B2)) is related to the environmental stability. In particular, when the amount of the polyester resin (A) is too high, the environmental stability is inadequate. Therefore, it is believed that Examples 15 to 25 described in the present specification should exhibit

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excellent properties in terms of environmental stability, compared to Examples 1, 4, 9 and 11".

Regarding this argument note, that data related to environmental stability provided by Table 3-2 showed inadequate environmental stability only for composition with **absence styrene based resin**, specifically for composition comprising 100 weight % of polyester resin and for this reason is not convincing, because composition disclosed by Nakanishi has styrene based resin **and** polyester based resin in substantially same ranges as it claim by Applicant in Claim 4.

3.3. Regarding Applicant's argument, that " Reference Examples 9 and 10, which were prepared by processes wherein the amount of the wax was **1 wt.%** and **18 wt.%**, respectively, **both** of which are outside the range of **1-13 wt.%** recited in present claim 4, showed inferior balance of fixing properties, offset-resistant properties and blocking resistant properties" note, that it is clear that 1wt% of wax constitute point that belongs to range of 1 to 13 wt% as it claimed by Applicant in Claim 4.

Therefore, this argument was found unpersuasive and for this reason, all Applicant's arguments are not persuasive as it was shown above.

### ***Conclusion***

**THIS ACTION IS NOT MADE FINAL**

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to GENNADIY MESH whose telephone number is (571)272-2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272 1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gennadiy Mesh  
Examiner  
Art Unit 1796

/GM/

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796